

WHAT IS CLAIMED IS:

1. A camera comprising:

an image-taking optical system which includes a focusing lens that is movable in an optical axis direction to carry out focusing,

a drive unit which drives the focusing lens to a target position,

a pulse generator which outputs pulse signals in accordance with movement of the focusing lens, and

a stop judging unit which judges that the focusing lens has stopped at the target position based on pulse signals from the pulse generator,

wherein the stop judging unit judges the status of the image-taking optical system, and

selectively carries out, depending on the detected status of the image-taking optical system, a first stop judgement in which it is judged that the focusing lens has stopped at the target position by detecting that the count value of pulse signals from the pulse generator has reached a count value corresponding to the target position, and a second stop judgement in which it is judged that the focusing lens has stopped at the target position by detecting that the output signal from the pulse generator does not change for a predetermined period or more.

2. The camera according to Claim 1, wherein

the stop judging unit detects the focal length of the image-taking optical system as the status of the image-taking optical system, and

carries out the first stop judgement when the focal length of the image-taking optical system is closer to the wide-angle side than a predetermined focal length, and carries out the second stop judgement when the focal length of the image-taking optical system is closer to the telephoto side than the predetermined focal length.

3. The camera according to Claim 1, wherein

the image-taking optical system includes a stop, and

the stop judging unit detects a set value of the stop as the status of the image-taking optical system, and carries out the first stop judgement when the set value of the stop is closer to the narrowed side than a predetermined value, and carries out the second stop judgement when the set value of the stop is closer to the open side than the predetermined value.

4. The camera according to Claim 1, wherein

in the second stop judgement, the predetermined period differs depending on the status of the image-taking optical system.

5. A lens apparatus which is attachable to a camera, comprising:

an image-taking optical system which includes a focusing lens that is movable in an optical axis direction to carry out focusing,

a drive unit which drives the focusing lens to a target position,

a pulse generator which outputs pulse signals in accordance with movement of the focusing lens, and

a stop judging means which judges that the focusing lens has stopped at the target position based on pulse signals from the pulse generator,

wherein the stop judging unit detects the status of the image-taking optical system, and

selectively carries out, depending on the detected status of the image-taking optical system, a first stop judgement that the focusing lens has stopped at the target position by detecting that the count value of pulse signals from the pulse generator has reached a count value corresponding to the target position, and a second stop judgement that the focusing lens has stopped at the target position by detecting that the output signal from the pulse generator does not change for a predetermined period or more.

6. The lens apparatus according to Claim 5, wherein

the stop judging unit detects the focal length of the image-taking optical system as the status of the image-taking optical system, and

carries out the first stop judgement when the focal length of the image-taking optical system is closer to the wide-angle side than a predetermined focal length, and carries out the second stop judgement when the focal length of the image-taking optical system is closer to the telephoto side than the predetermined focal length.

7. The lens apparatus according to Claim 5, wherein

the image-taking optical system includes a stop,

the stop judging unit detects a set value of the stop as the status of the image-taking optical system, and

carries out the first stop judgement when the set value of the stop is closer to the narrowed side than a predetermined value, and carries out the second stop judgement when the set value of the stop is closer to the open side than the predetermined value.

8. The lens apparatus according to Claim 5, wherein

the stop judging unit transmits a signal indicating that the focusing lens is being stopped to the camera when the stop judgement is carried out.

9. The lens apparatus according to Claim 5, wherein
in the second stop judgement, the predetermined period
differs depending on the status of the image-taking optical
system.
10. A camera system comprising:
a lens apparatus according to Claim 5, and
a camera to which the lens apparatus is attachable.